

# Installation | qqX

8-10 minutes

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## qqX - Quickemu Virtual Machine Manager

qqX will generally run straight 'out of the box' on the vast majority of Linux distributions.

### Host Systems

- Installation on Windows hosts has now been partly implemented via the WSL Linux Subsystem with support hopefully in an upcoming release.
- Running qqX on MacOS hosts is unfortunately not supported at present, due to BSD variances.
- Users of non-standard OS's such as **NixOS**, should view the installer script, plus read [issue #1](#) and details on [Filesystem Hierarchy Standards](#)

### Install from scratch

- Most users need only install `qemu spice-gtk` and `qqX`
  - Some distro versions may need `curl` `7z` `jq` `bc` and possibly `xrandr`
  - No further software, support structures or dependencies should be needed.
- `7z` is sometimes listed as `7zip` or `p7zip-full` and `xrandr` maybe found as part of `x11-xserver-utils`

### Qemu

Qemu may be listed with various names:

- **Arch** users should install 'qemu-desktop' not `qemu-base`.
  - **Debian** based distros may need several separate components to create the packages
- Some users may see Qemu listed by architecture as in `qemu-system-x86_64` and `qemu-system-aarch64`
- Only 'x86\_64' is needed unless you wish to emulate Arm etc ...
- Spice gtk may be listed as `spice-client-gtk`

### TPM

This is needed for Ubuntu Server and for installing Windows guests

Ubuntu 24.04 LTS at 01/2025 is three versions behind for `swtpm`

- This PPA may be used: <https://launchpad.net/~stefanberger/+archive/ubuntu/swtpm-noble>
- There is an on-going `swtpm` / `apparmor` [problem](#) too. Your mileage may vary.
- One way to fix this is to change `swtpm` settings from 'enforce' mode to 'complain'. See these [apparmor notes](#).
- Simplified GUI installers such as Gnome Software and KDE Discover may not list `swtpm`
- Command line use of `apt` or `dnf` etc may be needed
- Also see the [Windows Walk-thru guide](#) for notes on Secure Boot

### Older or LTS distros

Some distros can be a long way behind the curve and older QEMU versions may show occasional error messages.

- Ubuntu 22.04 can show `gui-module ui -ui` errors but tests seem to show these can be ignored.

### Other Notes

- **Fedora** does not have `Zsync` but this is non-critical as `Quickget` will switch to using `Curl`
- On **Solus**, *quickemu* won't currently run in UEFI mode, so no Windows 11 for now. See this [Solus issue](#).
- Support for SDL with **OpenSUSE** is patchy at best

- Grabbing <https://software.opensuse.org/package/SDL3> and <https://software.opensuse.org/package/qemu-ui-sdl> might work with certain versions > Select the file and open in Yast, then search sdl with the files option selected ...
- Immutable/atomic systems [may not allow](#) installations ....

## Install on top of Quickemu

Test out the qqX difference on your existing VM's:

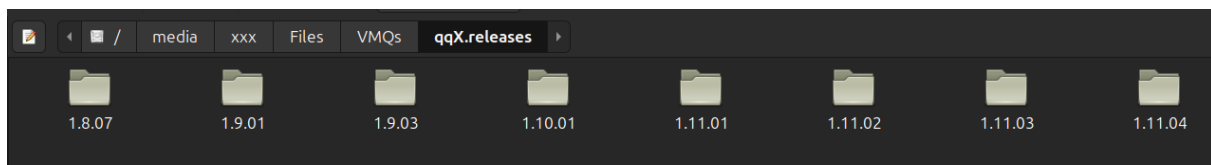
- qqX has been designed to work happily alongside quickgui or any quickemu shortcuts, if you already have them.
- The installation of quickemu is *not* essential but **Ubuntu** packages are available and will install the dependencies ...

The standard *Quickemu* instructions may be found on the [quickemu-project pages](#)

- Zsync is actively maintained by Ubuntu and only assists with Ubuntu Daily Live updates. Most distros do keep this package is up-to-date but you can ignore this install if you wish, as Quickget will revert to using Curl instead.

## qqX

- Download via the [latest qqX release](#) which will have been carefully tested.
- Alternatively, if newer [branches](#) are present, they may have the latest tweaks or features, and may possibly have bug fixes. Switch branches, click on the 'code' button and 'download zip'.



- Default Folders for the updater are ~/Downloads/qqX.releases and .../VMQs/qqX.releases but others may be used.

## File Manager

- For most usage cases, simply right clicking in a file manager and selecting extract or extract with ....

## Cmd Line

Create a qqX.releases folder and a subfolder numbered as per the release. Move the tar.gz file into the subfolder and extract as so:

```
mkdir -p "$HOME/Downloads/qqX.releases/1.11.04"

mv qqX-1.11.04.tar.* "$HOME/Downloads/qqX.releases/1.11.04/"

cd "$HOME/Downloads/qqX.releases/1.11.04"

sha256sum -c qqX-1.11.04.tar.gz.sha256
qqX-1.11.04.tar.gz: OK

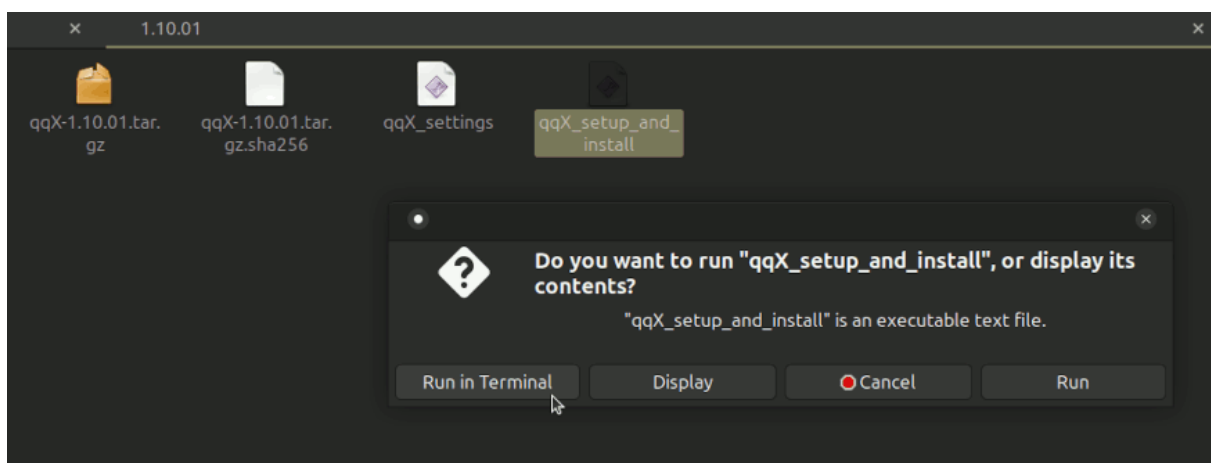
tar xvfz qqX-1.11.04.tar.gz
```

## When you are ready

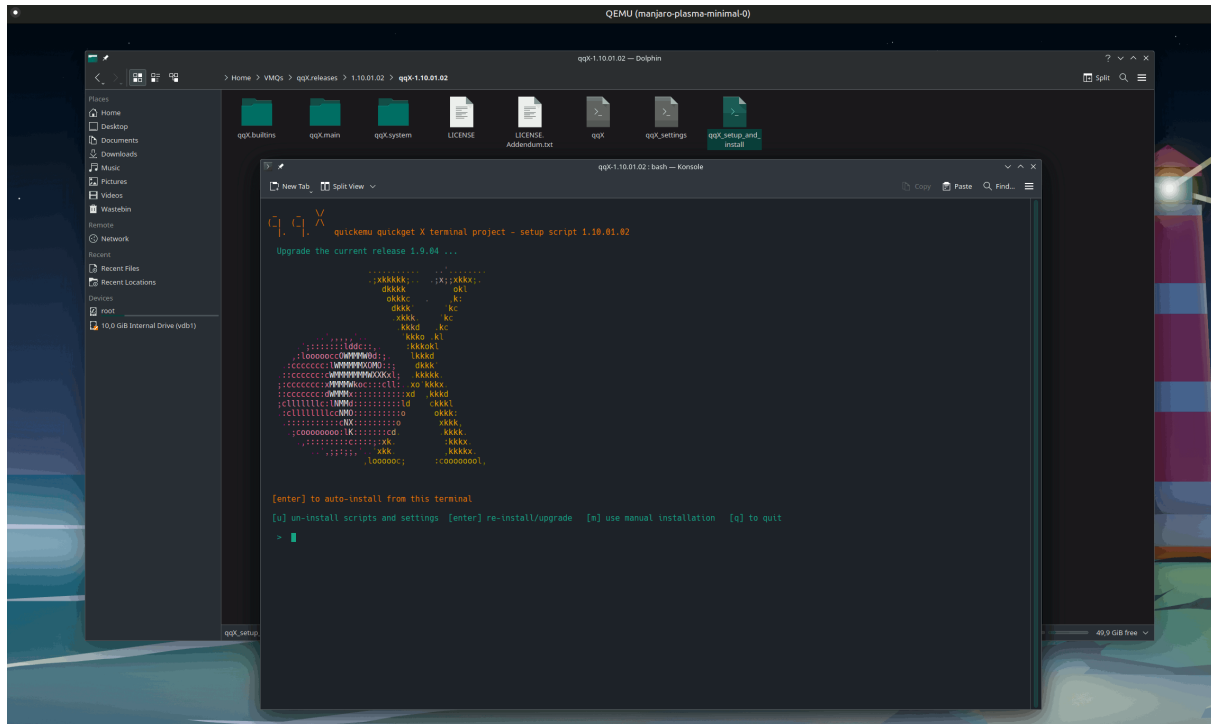
Run the installer:

- In many file managers you can usually right click, then run as program, or similar.

With Cinnamon and Mate, double click and 'run in terminal'



- In KDE/Dolphin, use 'run in konsole' or double click and execute.
- Also with Thunar, if the run scripts preference has been set.



In other environments it may be necessary to start the installer script by opening a terminal first.

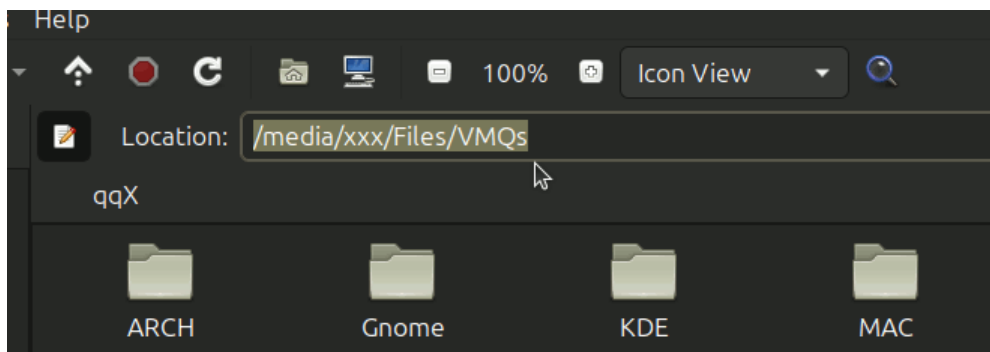
- In the file-manager folder > right click > open in terminal > type `./qqX_setup_and_install` ~ note prefix `./`

## Uninstall

- Re-run the installer and select to remove ...
  - To downgrade, using the installer from an earlier release will normally work without the the need to uninstall first.
- Further notes are in the installer script itself.

## Default VM folder

- If you have existing *quickemu* virtual machines, start qqX and edit the settings file to point to where they are.



- 'VMQs' is the standard default, in your Home folder, next to Downloads & Videos.
- Moving or renaming the default folder can be easily done using your file manager. Start qqX and edit the settings to point to it.

## First Machines

If everything appears to be working correctly, you can start exploring ...

- Installing a basic or familiar Linux distro will help tell you if Qemu and the sub-structure is working.
- An auto-detector will tell you when new qqX releases are available.
- The qqX installer can be used to *update*, *reinstall*, *uninstall* or *reconfigure*.

## Adjusting the terminal

qqX will test and setup most standard desktop associated terminals without problem.

To MANUALLY SPECIFY the terminal name, the installer script's 'UserTerm' variable may be edited.

- Open the script in a standard text editor. From Version 1.11 this is located at the start of the script.

From qqX version 1.10.02 onwards, a 'CustomTerminalProfile' will now be stored in the qqX settings folder. This file will be checked and auto-read when carrying out updates. The (hidden) file '\$HOME/.qqX/qqX\_term.conf' may also be edited.

MAKE SURE to SELECT option [r] reconfigure desktop launcher during installation, if changing the terminal command

### Profile options

It is quite common for different distros to rename or tweak a standard terminal. Typing the terminal name, followed by '--help' should give you a list of the parameters that you can use. Note that options can vary slightly and can also be subject to theming or desktop environment overrides.

For actual 'XTERM' itself, also edit the installer script's 'CustomTerminalProfile' eg `xterm -geometry 145x50 -fa truetype -fs 12`

For CUSTOM PROFILES, only one profile line is required and the actual sizes are best stated. Auto-updating size variable lines are difficult to set, due to 'escaping' routines, but may be initially be copied, if wished. Size variables will eventually become overwritten as numerics.

eg. `CustomTerminalProfile="--geometry=145x50 --hide-menubar --title=qqX "`

Remember that width and height are normally column/row units which are based on the size of your terminal font and that the window size will alter when the font size is changed.

- CUSTOM terminal sizes & profile may be *initially* set just after the initial system checking lines, at around line 290 in the target script `"/.qqX_system_install"` in the `qqX.system` folder. See notes in the target script.
- OR may be adjusted in the qqX config file following initial setup, which is possibly easier.

### Other Installation Tips

All folders can be easily moved around, *but* make sure that they have their `.conf` file next to them. And make sure the *config internals* point correctly. From version 1.7 onwards, there is now a handy move and rename tool to make this even easier still.

Multiple folders can help organise your distros. You can edit which VMs to show first in the general settings.

If you are finding the interface a bit cramped, re-run the installer making sure to run the desktop part. This will allow you to tweak the terminal size.

The qqX downloader script will have done this. But you can manually check the download integrity by opening a terminal in the release's download folder and typing `sha256sum -c qqX- "tab-key" . s "tab-key"`, if you have downloaded both of the named files from the release tab.

### Finally

Please report any unnoticed errors. Also any difficulties you may have encountered. By using this software you become a valued member of the community and can help make this software better for others.